

WHAT IS CLAIMED IS:

1. An infectious etiologic agent detection probe set which detects an infectious etiologic agent gene, comprising:

- 5 a plurality of kinds of probes including oligonucleotide having base sequences selected from each of a plurality of groups selected from a first group including base sequences of SEQ ID Nos. 1 to 14 and complementary sequences thereof, a second group
10 including base sequences of SEQ ID Nos. 15 to 24 and complementary sequences thereof, a third group including base sequences of SEQ ID Nos. 25 to 36 and complementary sequences thereof, a fourth group including base sequences of SEQ ID Nos. 37 to 47 and
15 complementary sequences thereof, a fifth group including base sequences of SEQ ID Nos. 48 to 57 and complementary sequences thereof, a sixth group including base sequences of SEQ ID Nos. 58 to 68 and complementary sequences thereof, a seventh group
20 including base sequences of SEQ ID Nos. 69 to 77 and complementary sequences thereof, an eighth group including base sequences of SEQ ID Nos. 78 to 85 and complementary sequences thereof, a ninth group including base sequences of SEQ ID Nos. 86 to 97 and
25 complementary sequences thereof, and a 10th group including base sequences of SEQ ID Nos. 98 to 106 and complementary sequences thereof.

2. A carrier on which a probe included in an infectious etiologic agent detection probe set of claim 1 is chemically immobilized.

3. A genetic screening method of detecting an infectious etiologic agent gene by using a carrier of claim 2.

4. An infection detection probe which can detect a gene originated in *Staphylococcus aureus*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 1 to 14 and complementary sequences thereof.

5. A probe set which can detect a gene originated in *Staphylococcus aureus* and includes at least one of infection detection probes each comprising oligonucleotide having one of the base sequences of SEQ ID Nos. 1 to 14 and complementary sequences thereof.

6. A carrier on which an infection detection probe included in the probe set of claim 5 is chemically immobilized.

7. A genetic screening method of detecting a gene originated in *Staphylococcus aureus* by using a carrier of claim 6.

8. An infection detection probe which can detect a gene originated in *Staphylococcus epidermidis*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 15 to 24 and complementary sequences thereof.

9. A probe set which can detect a gene originated in Staphylococcus epidermidis and includes at least one of infection detection probes each including oligonucleotide having one of the base sequences of SEQ
5 ID Nos. 15 to 24 and complementary sequences thereof.
10. A carrier on which an infection detection probe included in the probe set of claim 9 is chemically immobilized.
11. A genetic screening method of detecting a gene
10 originated in Staphylococcus epidermidis by using a carrier of claim 10.
12. An infection detection probe which can detect a gene originated in Escherichia coli, which includes oligonucleotide having one of the base sequences of SEQ
15 ID Nos. 25 to 36 and complementary sequences thereof.
13. A probe set which can detect a gene originated in Escherichia coli and includes at least one of infection detection probes each including oligonucleotide having one of the base sequences of SEQ
20 ID Nos. 25 to 36 and complementary sequences thereof.
14. A carrier on which at least one kind of infection detection probe of infection detection probes of claim 13 is chemically immobilized.
15. A genetic screening method of detecting a gene
25 originated in Escherichia coli by using a carrier of claim 14.
16. An infection detection probe which can detect a

gene originated in *Klebsiella pneumoniae*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 37 to 47 and complementary sequences thereof.

5 17. A probe set which can detect a gene originated in *Klebsiella pneumoniae* and includes at least one of infection detection probes each including oligonucleotide having one of the base sequences of SEQ ID Nos. 37 to 47 and complementary sequences thereof.

10 18. A carrier on which at least one kind of infection detection probe of infection detection probes of claim 17 is chemically immobilized.

19. A genetic screening method of detecting a gene originated in *Klebsiella pneumoniae* by using a carrier
15 of claim 18.

20. An infection detection probe which can detect a gene originated in *Pseudomonas aeruginosa*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 48 to 57 and complementary
20 sequences thereof.

21. A probe set which can detect a gene originated in *Pseudomonas aeruginosa* and includes at least one of infection detection probes each including oligonucleotide having one of the base sequences of SEQ
25 ID Nos. 48 to 57 and complementary sequences thereof.

22. A carrier on which an infection detection probe included in the probe set of claim 21 is chemically

immobilized.

23. A genetic screening method of detecting a gene originated in *Pseudomonas aeruginosa* by using a carrier of claim 22.

5 24. An infection detection probe which can detect a gene originated in *Serratia marcescens*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 58 to 68 and complementary sequences thereof.

25. A probe set which can detect a gene originated in
10 *Serratia marcescens* and includes at least one of infection detection probes each including oligonucleotide having one of the base sequences of SEQ ID Nos. 58 to 68 and complementary sequences thereof.

26. A carrier on which an infection detection probe
15 included in the probe set of claim 25 is chemically immobilized.

27. A genetic screening method of detecting a gene originated in *Serratia marcescens* by using a carrier of claim 26.

20 28. An infection detection probe which can detect a gene originated in *Streptococcus pneumoniae*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 69 to 77 and complementary sequences thereof.

25 29. A probe set which can detect a gene originated in *Streptococcus pneumoniae* and includes at least one of infection detection probes each including

oligonucleotide having one of the base sequences of SEQ ID Nos. 69 to 77 and complementary sequences thereof.

30. A carrier on which at least one kind of infection detection probe of infection detection probes of claim
5 29 is chemically immobilized.

31. A genetic screening method of detecting a gene originated in *Streptococcus pneumoniae* by using a carrier of claim 30.

32. An infection detection probe which can detect a
10 gene originated in *Haemophilus influenzae*, which includes oligonucleotide having one of the base sequences of SEQ ID Nos. 78 to 85 and complementary sequences thereof.

33. A probe set which can detect a gene originated in
15 *Haemophilus influenzae* and includes at least one of infection detection probes each including oligonucleotide having one of the base sequences of SEQ ID Nos. 78 to 85 and complementary sequences thereof.

34. A carrier on which at least one kind of infection
20 detection probe of infection detection probes of claim 33 is chemically immobilized.

35. A genetic screening method of detecting a gene originated in *Haemophilus influenzae* by using a carrier of claim 34.

25 36. An infection detection probe which can detect a gene originated in *Enterobacter cloacae*, which includes oligonucleotide having one of the base sequences of SEQ

ID Nos. 86 to 97 and complementary sequences thereof.

37. A probe set which can detect a gene originated in *Enterobacter cloacae* and includes at least one of infection detection probes each including

5 oligonucleotide having one of the base sequences of SEQ ID Nos. 86 to 97 and complementary sequences thereof.

38. A carrier on which at least one kind of infection detection probe of infection detection probes of claim 37 is chemically immobilized.

10 39. A genetic screening method of detecting a gene originated in *Enterobacter cloacae* by using a carrier of claim 38.

40. An infection detection probe which can detect a gene originated in *Enterococcus faecalis*, which
15 includes oligonucleotide having one of the base sequences of SEQ ID Nos. 98 to 106 and complementary sequences thereof.

41. A probe set which can detect a gene originated in *Enterococcus faecalis* and includes at least one of
20 infection detection probes each including oligonucleotide having one of the base sequences of SEQ ID Nos. 98 to 106 and complementary sequences thereof.

42. A carrier on which at least one kind of infection detection probe of infection detection probes of claim
25 41 is chemically immobilized.

43. A genetic screening method of detecting a gene originated in *Enterococcus faecalis* by using a carrier

of claim 42.

44. An infectious etiologic agent amplification reaction primer used to PCR-amplify a 16s rRNA gene arrangement of an infectious etiologic agent,

5 comprising:

oligonucleotide having one of base sequences of SEQ ID Nos. 107 to 112.

45. The primer according to claim 44, wherein the sequence is different from a base sequence of a human
10 genome DNA by not less than three bases.

46. An infectious etiologic agent amplification reaction primer set used to PCR-amplify a 16s rRNA gene arrangement of an infectious etiologic agent,
comprising:

15 a plurality of primers each comprising oligonucleotide having a plurality of base sequences including at least one of base sequences of SEQ ID Nos. 107 to 109 and at least one of base sequences of SEQ ID Nos. 110 to 112.

20 47. The primer set according to claim 46, wherein PCR reaction is caused for a human blood specimen by using all the primer sets simultaneously.

48. An infectious etiologic agent detection method of detecting an infectious etiologic agent by a DNA probe
25 by executing a PCR amplification process using an infectious etiologic agent amplification reaction primer set of claim 46.

49. An infectious etiologic agent detection probe set which detects an infectious etiologic agent gene, comprising:

a plurality of kinds of probes including

5 oligonucleotide having base sequences selected from each of a plurality of groups selected from a first group including base sequences of SEQ ID Nos. 1 to 9 and complementary sequences thereof, a second group including base sequences of SEQ ID Nos. 15 to 21 and

10 complementary sequences thereof, a third group including base sequences of SEQ ID Nos. 25 to 31 and complementary sequences thereof, a fourth group including base sequences of SEQ ID Nos. 37 to 42 and complementary sequences thereof, a fifth group

15 including base sequences of SEQ ID Nos. 48 to 55 and complementary sequences thereof, a sixth group including base sequences of SEQ ID Nos. 58 to 62 and complementary sequences thereof, a seventh group including base sequences of SEQ ID Nos. 69 to 75 and

20 complementary sequences thereof, an eighth group including base sequences of SEQ ID Nos. 78 to 84 and complementary sequences thereof, a ninth group including base sequences of SEQ ID Nos. 86 to 92 and complementary sequences thereof, and a 10th group

25 including base sequences of SEQ ID Nos. 98 to 101 and complementary sequences thereof.